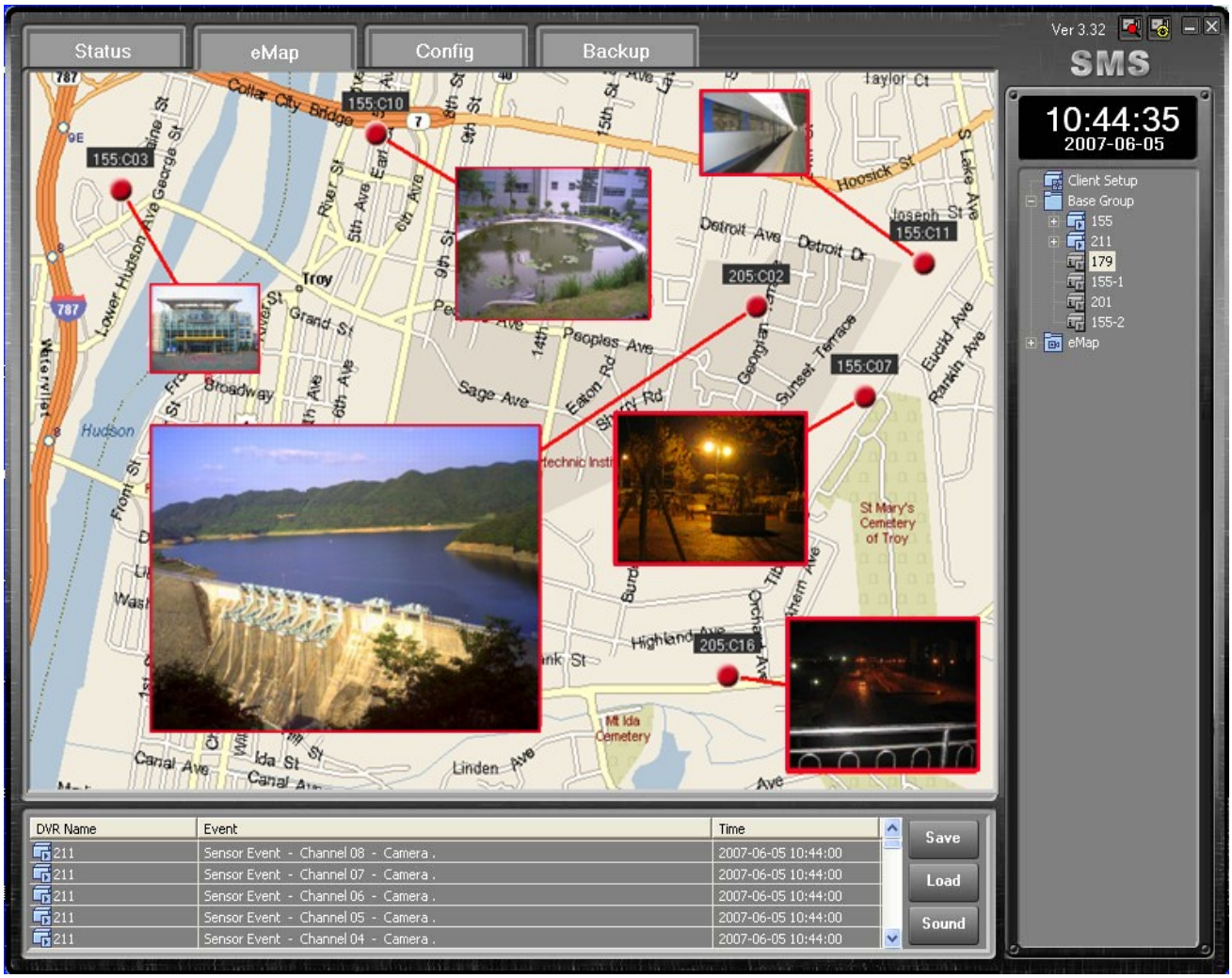

SMS (Server Management Software)

Digital Video Recorder

User's Manual

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Chapter 1. Overview

1.1 In This Manual

This manual describes the procedures for operating Remote Server Management Software (SMS, hereinafter) designed for the digital video recorder.

1.2 Overview

The SMS consists of SMS, Live Viewer and Search Viewer programs.

- SMS: Main administration program
- Live Viewer: Remote Surveillance & Cameo Playback program
- Search Viewer: Remote Search program

1.3 SMS Features

- Check and report the DVR system status at a remote site
- Notification of the event detection from remote sites
- Remote monitoring of live camera images
- Time and event search of recorded images
- Remote software
- E-mapping
- Various Backup tools at a remote site
- Remote configuration for recording and camera setup
- Remote Command CD backup to a server

1.4 Product Information

- SMS User’s Guide
- SMS Installation CD(1ea)

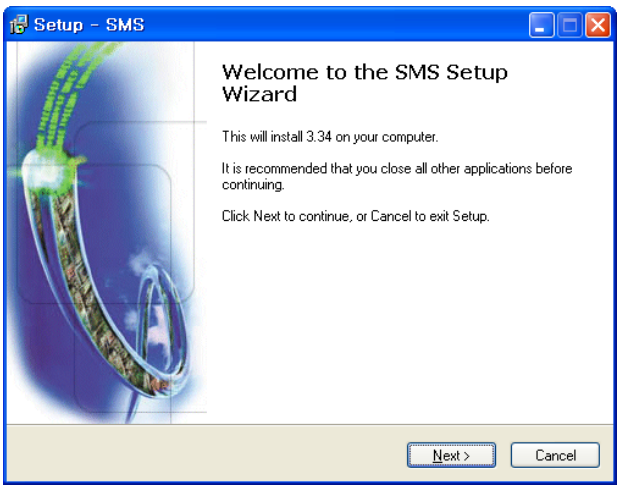
System Requirements

- Operating System: Microsoft Windows 2000 or higher
- CPU: Intel Processor 800Mhz or higher
- RAM: 256MB or higher
- VGA: 16MB or higher

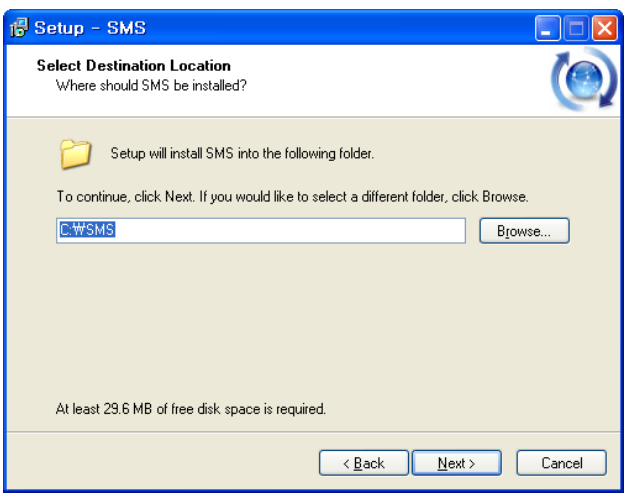
Chapter 2. Installation & Operation

2.1 Installation Procedures

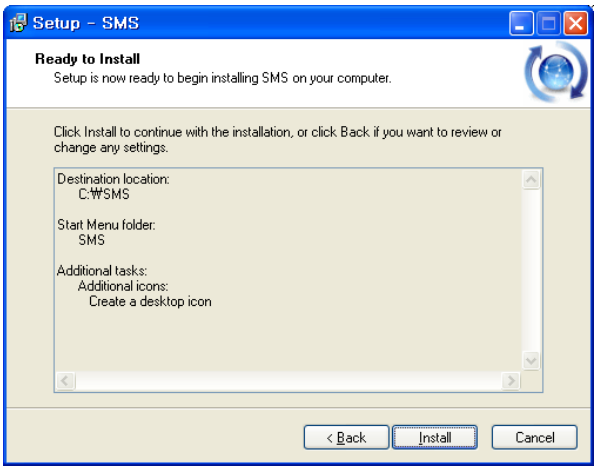
1. Insert the installation CD.
2. Run the "Setup.exe" file.
3. When the following dialog box appears, click "Next".


Setup - SMS
Welcome to the SMS Setup Wizard
This will install 3.34 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

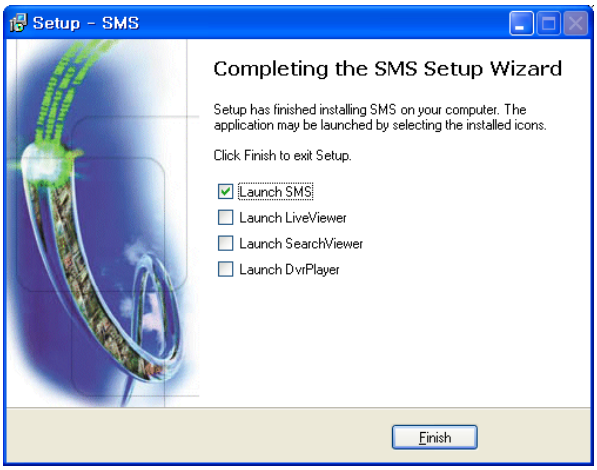
4. Click "Next".


Setup - SMS
Select Destination Location
Where should SMS be installed?
Setup will install SMS into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\SMS
Browse...
At least 29.6 MB of free disk space is required.
< Back
Next >
Cancel

5. Click “Install”.

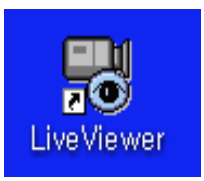


6. Click “Finish”.


Setup - SMS
Completing the SMS Setup Wizard
Setup has finished installing SMS on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch SMS
Launch LiveViewer
Launch SearchViewer
Launch DvrPlayer
Finish

2.2 Operating Procedures

After installing the SMS Software, you can find the “SMS”, “Liver Viewer” , “Search Viewer” on the desktop.



Run the programs by double clicking the icons. The Four programs can be displayed at the same time.

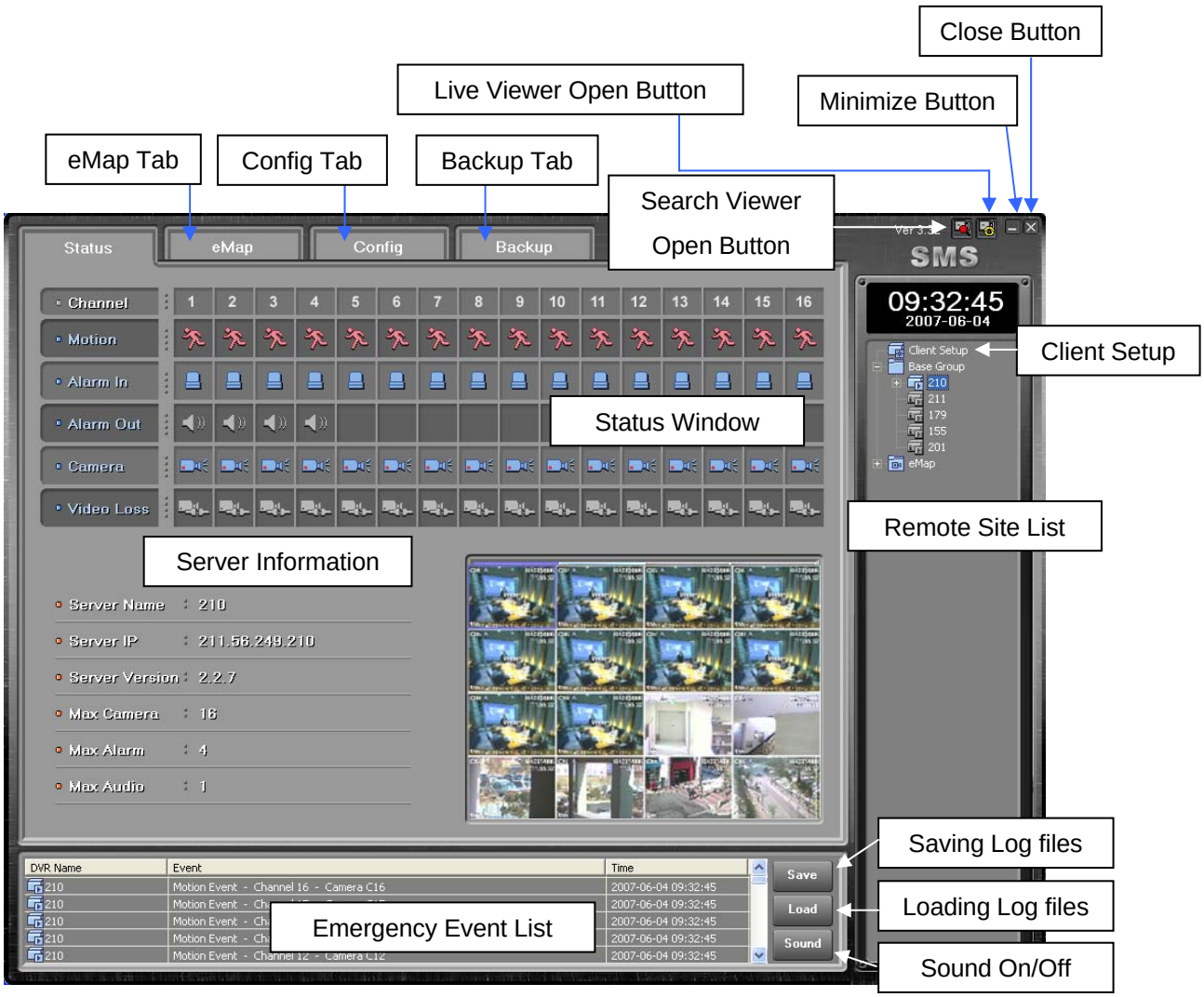
Chapter 3. SMS Admin

3.1 Description

The SMS, the main administration software of the SMS consists of: Status, e-Map, Config and Backup. The SMS program is the integrated software that controls system management, video monitoring, e-Mapping and Backup of multiple remote digital video recorder (DVR, hereinafter) system. The Graphical User Interface (GUI) of the SMS is shown below, and the description of each GUI is followed.

3.2 Functions of the SMS

3.2.1 Status



• Remote Site List: Displays the list of remote sites registered in the SMS.

• Client Setup: Allows to set up the Client PC (Please refer to the next page).

• Close Button: Closes the SMS program.

• Minimize Button: Minimizes the SMS program.

• Live Viewer Open Button: Activates the Live Viewer program.

• Search Viewer Open Button: Activates the Search Viewer program.

• e-Map Tab: Opens the e-Map page.

• Config Tab: Opens the Configuration page.

• Backup Tab: Opens the Backup page.

• Status Window: Displays the status of the remote DVR system currently connected (motion detection, alarm In status, Alarm Out, Camera On/Off and Video Loss).

• Server Information: Displays the Server Information of the remote DVR system currently connected (Name, IP Address, Software Version, connected Camera and Alarm numbers).

• Emergency Event List: Displays the event(s) called back from the remote DVR system currently connected.

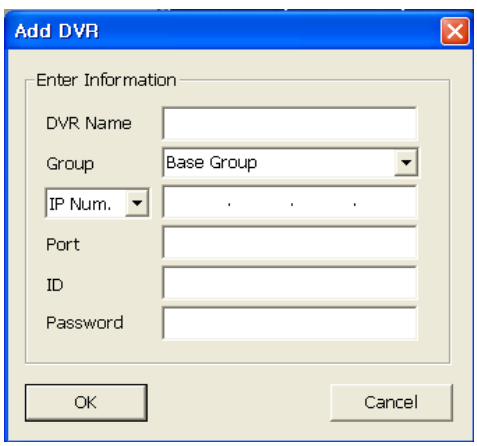
• Save Button: Saves the Emergency Event List to the “C:\Program Files\SMS\Backup\Log” folder.

• Load Button: Loads the saved Emergency Event Log files from the “C:\Program Files\SMS\Backup\Log” folder in your computer.

To make the Remote Server List, press the right button of the mouse after locating the mouse pointer on the Remote Site List area and press “Add GROUP”. The below window will appear. Enter the Group name.

After adding a Group, press the right button on the Group name and select “Add DVR”. You can enter the DVR name, IP Address(or Domain or PSTN), Port, ID and password.

Default: Port – 7000, ID – remote, Password – 1111.

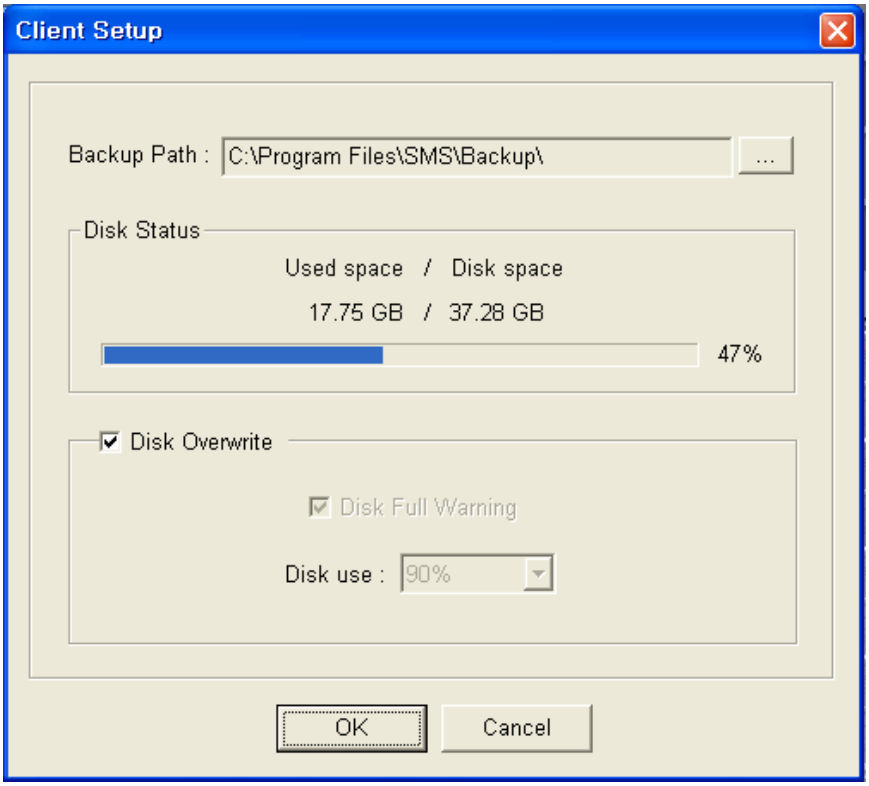


To connect to the DVR, double click the DVR on the Remote Server List.

The connection status window will be popped up and the SMS Status Screen will display the live images from the Server when the connection is completed.

CLIENT SETUP

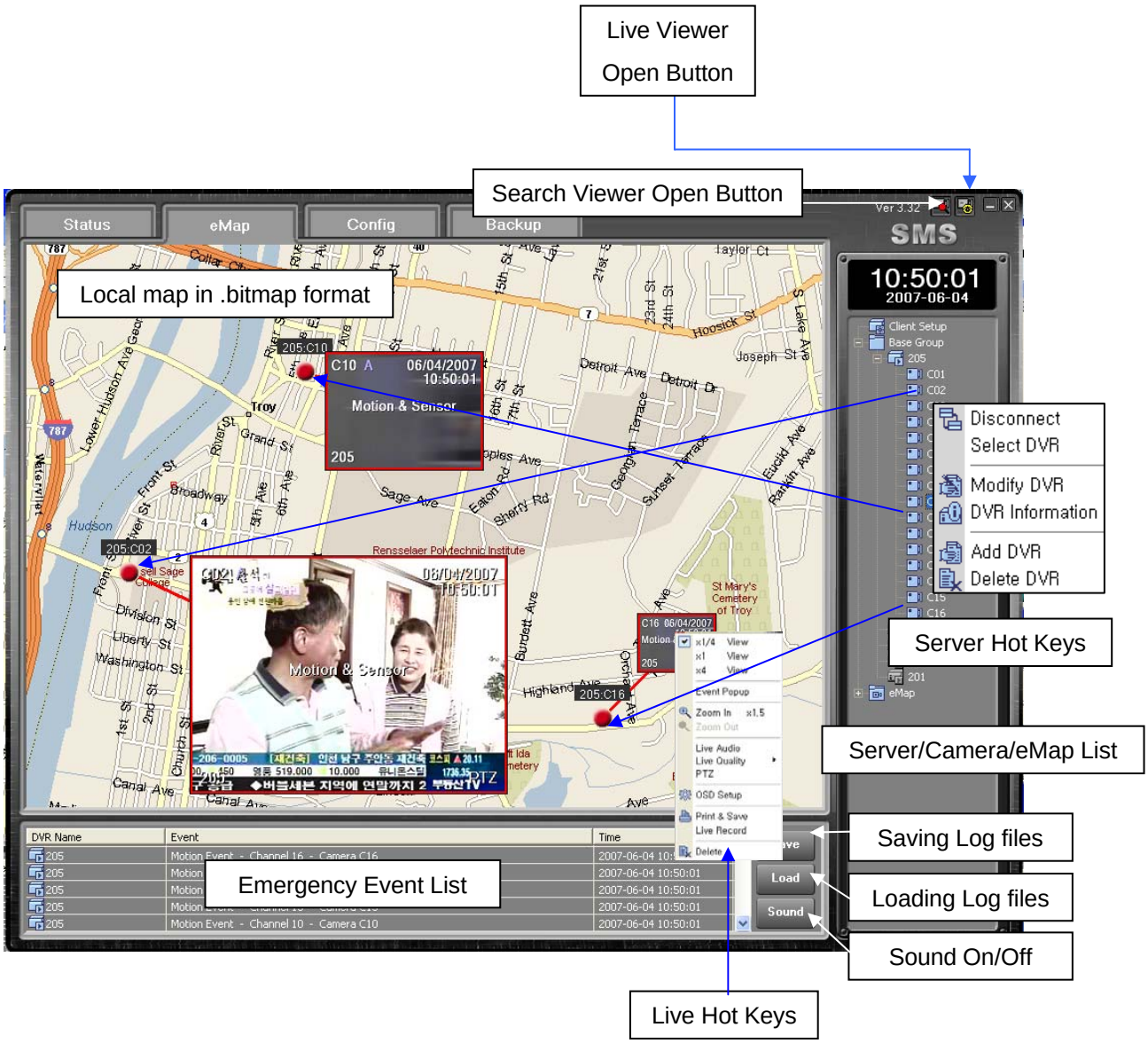
When double-clicking the Client Setup button on the Status page, the below screen will be displayed.



You can change the backup path by pressing button and the Client Setup screen will display the Disk Status. Also, you can turn on or off select the Disk Overwrite function. When not using the disk overwrite function, you can turn on Disk Full warning and select the Disk Usage % from the down list menu.

3.2.2 e-Map

The e-Map functions allows you mapping by using your local map in .bitmap format. You can locate any camera from any remote server to your map by dragging and dropping from the list. The live screen on the map has convenient hot key by pressing the right button of the mouse. The Graphical User Interface (GUI) of the e-Map is shown below, and the description of each GUI area follows.



When clicking the right button of the mouse after locating the mouse pointer on a Live Screen, the Pop-up Menu will appear.

• Viewer Size Adjustment: You can adjust the viewer size by selecting x1/4, x1or x4.

• Digital Zoom: You can zoom in or out to x1.5 or x2.

• Live Audio: You can turn on or off the live audio.

• OSD Setup: You can set up the On Screen Display (OSD) for DVR and Camera Name, Date/Time and Event.

• Print & Save: You can print the Live Image and save it in .jpg format.

• Live Recording: You can record the live screen to your computer. The files will be save to the "C:\SMS\Backup\Live\Server Name" folder.

• You can delete the live camera on the map.

When clicking the right button of the mouse after locating the mouse pointer on the Base Group Icon, the Pop-up Menu will appear and you can add/modify/delete Groups and add DVR servers.

When clicking the right button of the mouse after locating the mouse pointer on a DVR server, you can add/modify/delete DVR server or check the server information.

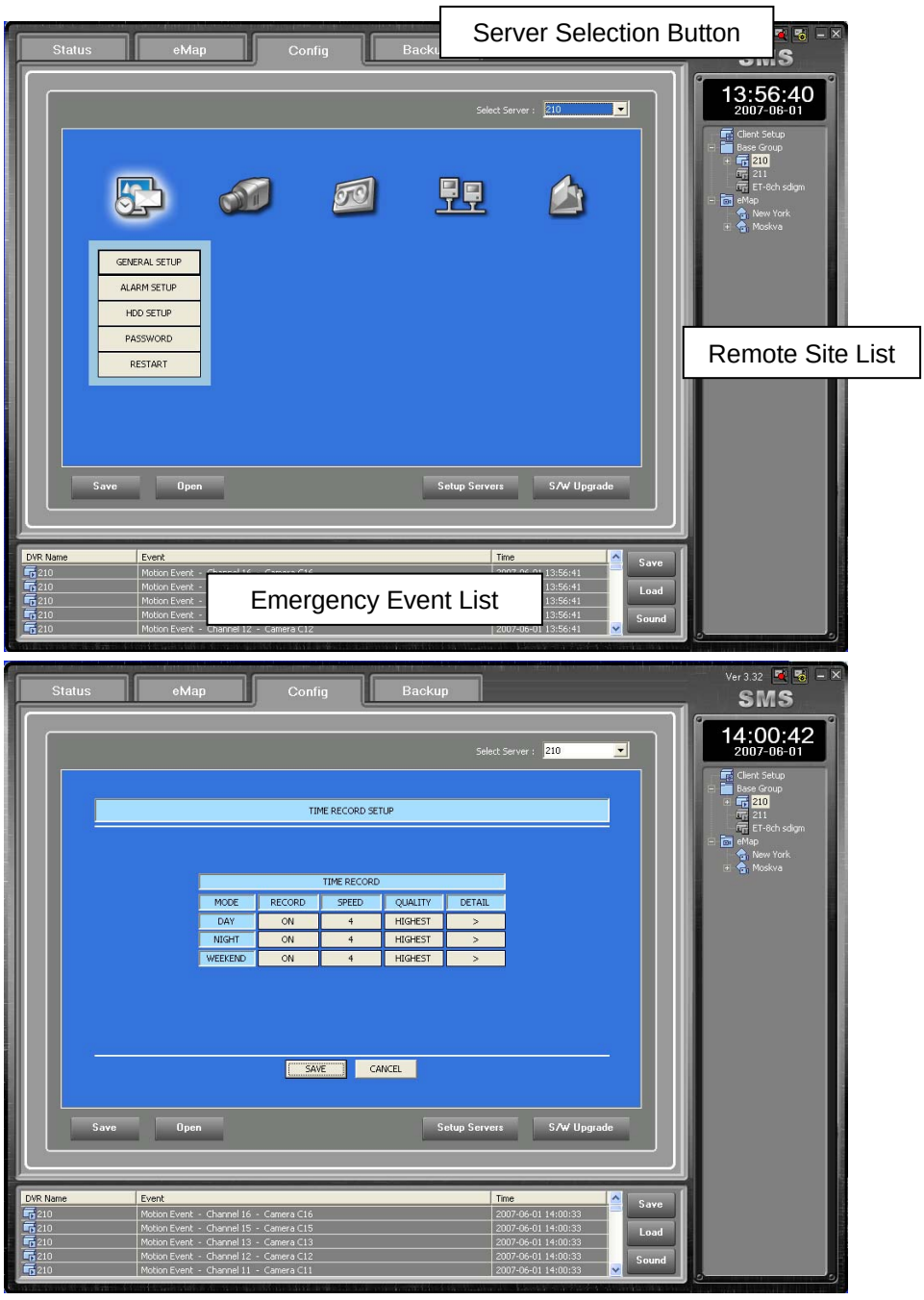
When clicking the right button of the mouse after locating the mouse pointer on the e-Map Icon, the pop-up menu allows you to add e-Map or load new maps.

(Hot Key Menus)

3.2.3 Config

The SMS allows to change the local server settings remotely but this function is user password protected. The Graphical User Interface (GUI) of the Config is shown below, and the description of each GUI area follows.

You can save the current configuration by pressing the Save button and load the saved configuration by pressing the Open button.



You can control most of menus of the remote server. Select the server first by pressing the Server selection button.

It will allow you to open the server GUI menu and to change the menus. These changes can be applied to the local servers. For the server menus, please refer to the included Server Manual into the DVR package.

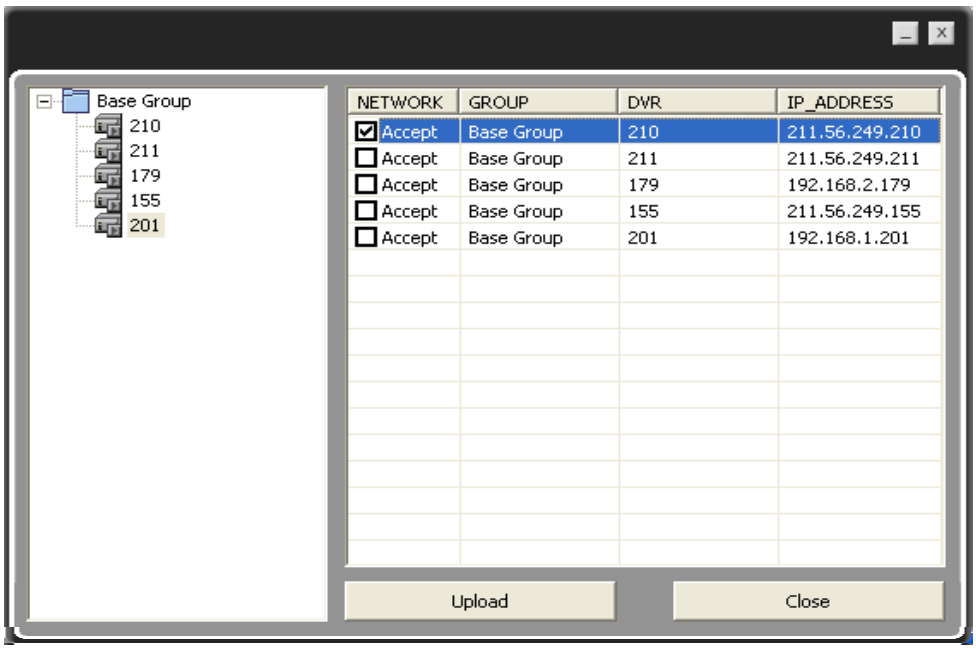
After changing the details in the sub-menu, press the Save button to save the changes or press the Cancel button to exits from the menu without saving.

To apply these changes to the local servers, press the Setup Servers button. Then, the below password window will be popped up.

The default password is 1234 and you can change the password by pressing the Change button.

NOTE: Keep the password confidential to prevent changes by unauthorized users.

Please type the password and press the Enter button. The below screen will be displayed.



When double-clicking the Server names on the list, the clicked server will be listed to the right screen. After listing server names that you want to change the configuration, please the Upload button. Then, the changed configuration will be applied to the selected servers by turn. It will allow you to apply same configuration to multiple servers once.

Also, you can save configuration to your PC by pressing the Save button after changing the menu or you can load saved configuration from your PC.

When pressing the Save button, the current configuration will be saved to the “C:\Program Files\SMS\Backup\Config” folder.

Software Upgrade

You can upgrade the local servers remotely by using S/W upgrade function on the Config page of SMS. Press the S/W upgrade button. Then the below screen will be popped up.

3.2.4 Backup

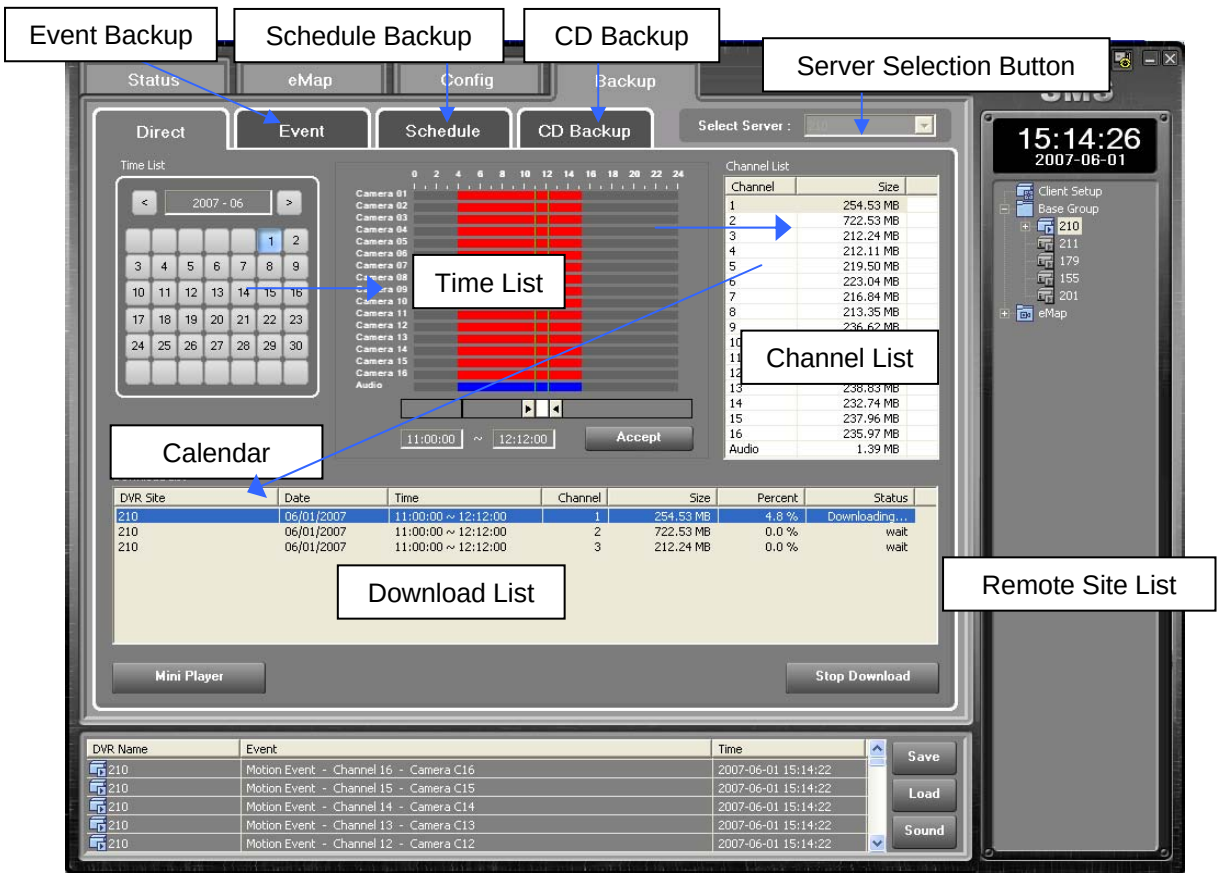
The SMS Backup Screen displays 4 different backup pages and you can back up the recorded images by 4 different backup methods, Direct, Event, Schedule and CD Backup.

Direct Backup

1. Press the Server Selection Button and select a Server for Backup.
2. When selecting a Server, the Days on the calendar that have recorded video will turn to the Blue Color. Click a Day that you want to back up.
3. When selecting a Day, the Time Line that has recorded video will be turned to the Blue color and you can select the time by moving the selection bar.
4. Double-click the channels that you want to back up on the Channel list. That channels will be shown on the Download List.
5. Press the Start Download button.
6. You can playback the downloaded files by using the Mini Player. Double-click one of the downloaded files on the download list. The Mini Player will be activated.

The downloaded files will be save to the "C:\SMS\Backup\Direct\Server Name\Date" folder.

NOTE: The Mini Player can playback the downloaded files that have been completed.

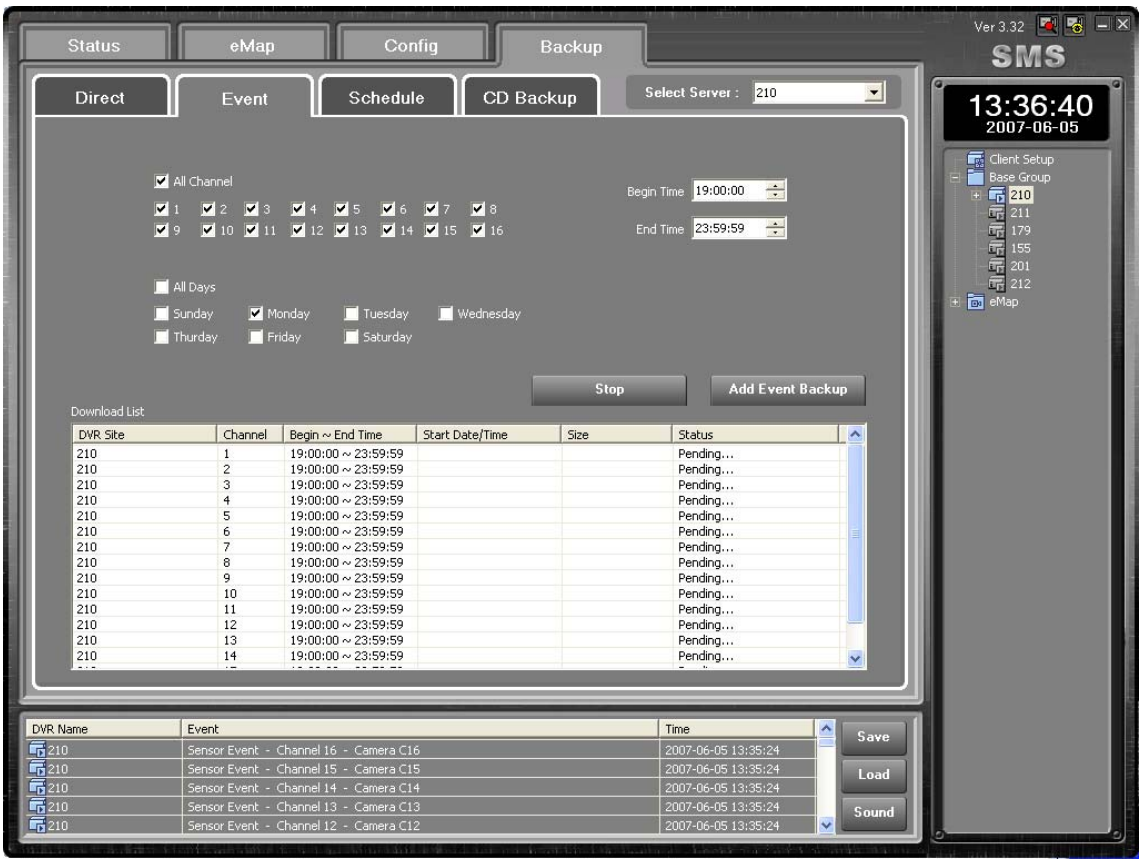


Event Backup

This Event Backup means the live event backup from the local server to the client PC. Please select the channels, time and days on the below screen. When pressing the Add Event Backup button, a list will be created to the Download List. Then, press the Start button. The SMS program will be start downloading videos which has events only.

CAUTION: Please turn on the image on the event action menu of the local server menu.

This function is very useful when downloading videos that have events for certain time, days.

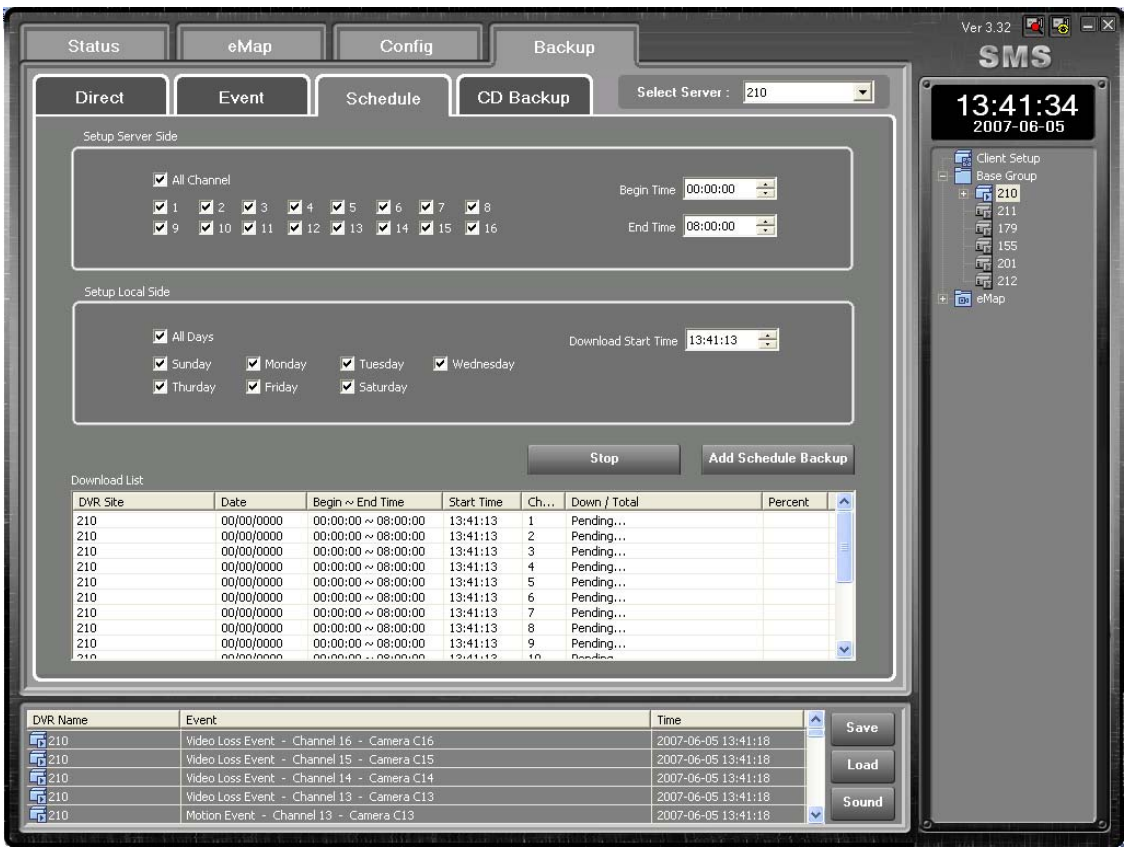

Status
eMap
Config
Backup
Ver 3.32
SMS
Direct
Event
Schedule
CD Backup
Select Server : 210
13:36:40
2007-06-05
All Channel
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Begin Time 19:00:00
End Time 23:59:59
All Days
Sunday Monday Tuesday Wednesday
Thurday Friday Saturday
Stop
Add Event Backup
Download List
DVR Site | Channel | Begin ~ End Time | Start Date/Time | Size | Status
210 | 1 | 19:00:00 ~ 23:59:59 | Pending...
210 | 2 | 19:00:00 ~ 23:59:59 | Pending...
210 | 3 | 19:00:00 ~ 23:59:59 | Pending...
210 | 4 | 19:00:00 ~ 23:59:59 | Pending...
210 | 5 | 19:00:00 ~ 23:59:59 | Pending...
210 | 6 | 19:00:00 ~ 23:59:59 | Pending...
210 | 7 | 19:00:00 ~ 23:59:59 | Pending...
210 | 8 | 19:00:00 ~ 23:59:59 | Pending...
210 | 9 | 19:00:00 ~ 23:59:59 | Pending...
210 | 10 | 19:00:00 ~ 23:59:59 | Pending...
210 | 11 | 19:00:00 ~ 23:59:59 | Pending...
210 | 12 | 19:00:00 ~ 23:59:59 | Pending...
210 | 13 | 19:00:00 ~ 23:59:59 | Pending...
210 | 14 | 19:00:00 ~ 23:59:59 | Pending...
Client Setup
Base Group
210
211
179
155
201
212
eMap
DVR Name | Event | Time
210 | Sensor Event - Channel 16 - Camera C16 | 2007-06-05 13:35:24
210 | Sensor Event - Channel 15 - Camera C15 | 2007-06-05 13:35:24
210 | Sensor Event - Channel 14 - Camera C14 | 2007-06-05 13:35:24
210 | Sensor Event - Channel 13 - Camera C13 | 2007-06-05 13:35:24
210 | Sensor Event - Channel 12 - Camera C12 | 2007-06-05 13:35:24
Save
Load
Sound

Schedule Backup

The Schedule Backup has the Timer backup function allowing to start downloading at the assigned time.

- Press the Server Selection Button and select a Server for Backup.
- Select Channels and Days that you want to back up.
- Set the Begin Time and End Time.
- Set the Download Start Time.
- Press the Add Schedule Backup button.
- The SMS will start downloading at the assigned Download Start Time.

The downloaded files will be saved to the "C:\SMS\Backup\Schedule\Server Name\Date" folder.

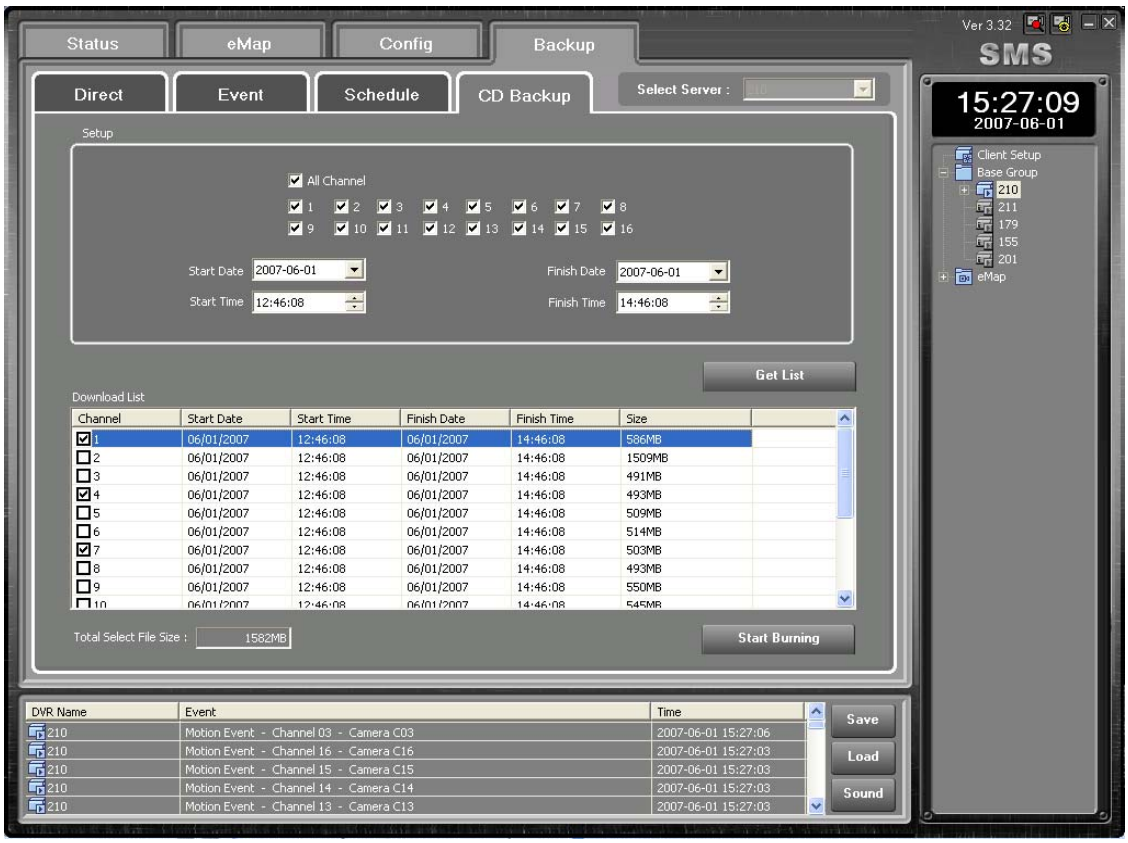

Status
eMap
Config
Backup
Ver 3.32
SMS
Direct
Event
Schedule
CD Backup
Select Server : 210
13:41:34
2007-06-05
Setup Server Side
All Channel
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Begin Time 00:00:00
End Time 08:00:00
Client Setup
Base Group
210
211
179
155
201
212
eMap
Setup Local Side
All Days
Sunday Monday Tuesday Wednesday
Thurday Friday Saturday
Download Start Time 13:41:13
Stop
Add Schedule Backup
Download List
DVR Site | Date | Begin ~ End Time | Start Time | Ch... | Down / Total | Percent
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 1 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 2 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 3 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 4 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 5 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 6 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 7 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 8 Pending...
210 00/00/0000 00:00:00 ~ 08:00:00 13:41:13 9 Pending...
DVR Name | Event | Time
210 Video Loss Event - Channel 16 - Camera C16 2007-06-05 13:41:18
210 Video Loss Event - Channel 15 - Camera C15 2007-06-05 13:41:18
210 Video Loss Event - Channel 14 - Camera C14 2007-06-05 13:41:18
210 Video Loss Event - Channel 13 - Camera C13 2007-06-05 13:41:18
210 Motion Event - Channel 13 - Camera C13 2007-06-05 13:41:18
Save
Load
Sound

CD Backup

The SMS allows you the Command CD Backup to the Remote Server Site. It's a command to the remote DVR server from the SMS software and the video will be downloaded to the CD-RW or DVD Combo in the remote DVR Server.

- Press the Server Selection button and select a server that you want to download to.
- Select Channels.
- Set the Start Date/Time and Finish Date/Time.
- Press the Get List Button and the Download list will be displayed.
- Select the Channels for downloading.
- Press the Start Burning Button.

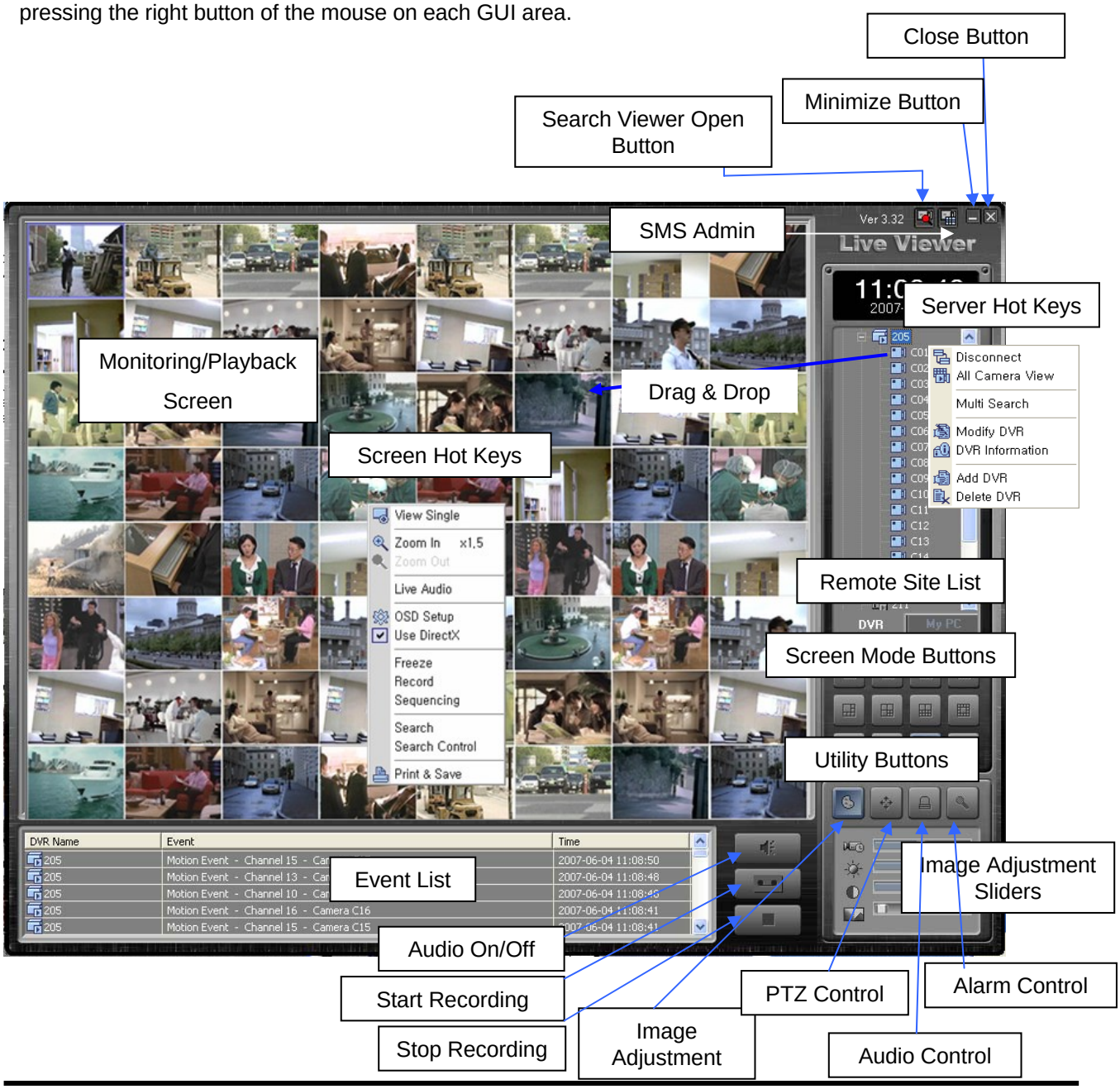
NOTE: When the file size is bigger than one CD, you will asked to put another one.



Chapter 4. SMS Live Viewer

4.1 Description

The SMS Live Viewer is powerful and reliable remote surveillance software, which provides a 64ch remote monitoring function for video or recorded images in real time from either a single or multiple sites and it allows to assign each channel to display live video or playback recorded video at the same time. In addition, when events are detected at a remote site, the SMS Live Viewer displays the event information, and allows users to access the remote site directly to search the image associated with the event. The GUI of the SMS Live Viewer is shown below and the description of each GUI are follows. You can use the hot key menu by pressing the right button of the mouse on each GUI area.



• Monitoring/Playback Screen: Displays or plays back images from selected cameras.

NOTE: Displays “PB” on the screen while playing back video. No Video when the remote DVR system has no video input.

• Screen Hot Keys: Allows to use the Screen hot key menu by pressing the right button of the mouse on the Monitoring/Playback Screen area.

• Event List: Displays the event logs of a remote DVR system.

• Close Button: Closes the Live Viewer program.

• Minimize Button: Minimizing the Liver Viewer program.

• Search Viewer Open Button: Opens the Search Viewer program.

• SMS Admin Open Button: Opens the SMS Admin program.

• Remote Site List: Displays registered Servers.

NOTE: The registered servers in SMS Admin or Search Viewer appears without registering.

• Server Hot Keys: Allows to use the Server hot key menu by pressing the right button of the mouse on the Remote Site List area.

• Screen Mode Buttons: Allows selection of single/quad/3x3/4x4/6/7/10/13/36/64/Select all channels/Full Screen.

• Utility Buttons: Enables various SMS Live Viewer utility programs (Image Adjustment, PTZ control, Audio Control and Alarm Control).

• Image Adjust Sliders: Allows adjustment of viewed images (Frame Rate, Brightness, Contrast and Filter).

• Live Audio: Allows to turn on or off Live Audio.

• Start Recording: Allows to start recording.

• Stop Recording: Allows to stop recording.

4.2 Functions of the SMS Live Viewer

Remote Sites

▶ Adding/Deleting remote sites

Click the right button of the mouse on the Remote Site List area. The hot key menu will appear. Add a Group first and you can assign multiple servers to a Group. Refer to the below Figures.

You can add or delete Groups as shown below by the hot key menu.

Click the right button of the mouse on a Group to add a DVR, connect/disconnect the Group or add/modify/delete the Group.

Click the right button of the mouse on a remote server to display the hot key menu. You can add/delete/modify the DVR and display the DVR information.

▶ Adding/Deleting favorites

Click the right button of the mouse on Favorites to add/modify/delete Favorites.

▶ Connecting the site

Double-click the registered DVR or select “Connect” on the hot key menu. Then press the “All Camera Menu” on a Pop-up menu. All the channels from the DVR server will be displayed. You can locate any camera from any server and swap the viewed camera channels by dragging and dropping.

▶ Screen Mode Buttons

To select the screen mode, click one of the 12 buttons shown below.

You can also select all channels or Full Screen mode button.

Full Screen Button

▶ Single-screen mode

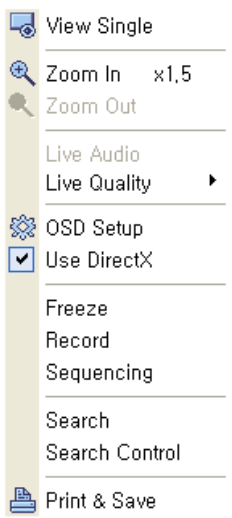
To view a specific image in the single-screen mode, move the cursor to that image and double click the left mouse button.

▶ Return to the previous screen mode

To return to the previous screen mode from the single-screen mode, double click the left mouse button in the monitoring/playback window.

▶ Screen Hot Key Menu

Press the right mouse button on the monitoring/playback window to display the hot key menu shown on below.



Select the screen mode between single or multi.

Zoom In/Out to 1.0x, 1.5x or 2x.

Turn On/Off Live Audio.

Selecting OSD Menu, DVR Name/Camera Name/Date/Time/Event.

Turn On/Off the Direct X.

Freeze the viewed image.

Turn On/Off Recording.

Turn On/Off Auto-Sequencing.

Allows to search the recorded video for playback.

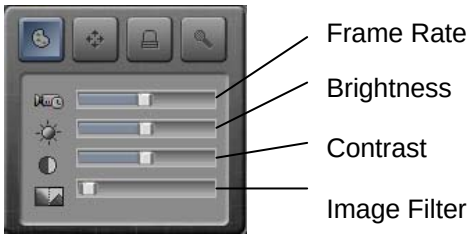
Pop-up the Search Control Pad.

Print or Save the viewed image in .jpg format.

Utility Buttons

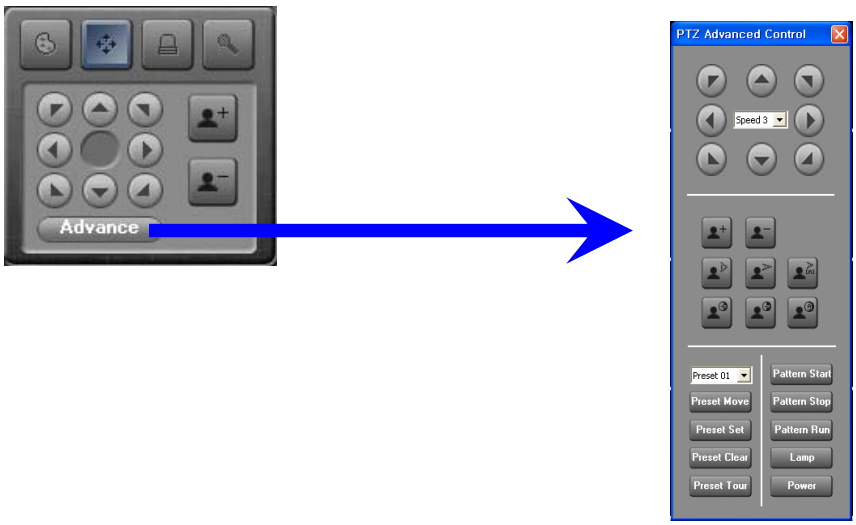
▶ Image Adjust Sliders

Adjust the Frame Rate, Brightness, Contrast and Filter by controlling the sliders shown below.



▶PTZ Control

Control the connected PTZ cameras by using the control pad shown below.



▶Alarm / Audio Control

Control the Alarms or Audio by using the control pad shown below. Select a server from a drop list menu and you can control the Alarms or turn on/off the audio.

Chapter 5. SMS Search Viewer

5.1 Description

The SMS Search Viewer is remote search software, which searches for recorded images on the remote DVR system or your computer and plays back the found images. In addition to time search, playback functions, file (image) save and file (image) print. Features of the SMS Search program are as follows;

- Time and Event Search
- Zoom
- Various Image enhancement
- Saves the current image
- Prints the current image

The search function is a process that the system searches for recorded data by time date/time and then plays back the found images.

5.2 Time Search

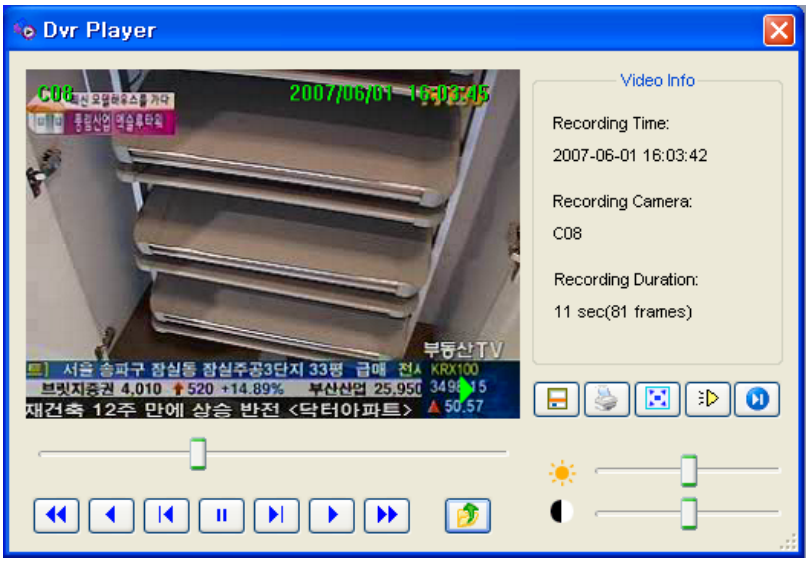
In the time mode, the system searches for recorded images by date/time and plays back the found images. Selecting a date from the calendar initializes time search. The dates for which recording is available are displayed in blue color. When entering the search mode, recorded information available from the selected date is shown on the recording status table. The recorded data are displayed by time (in hour segments). A green line indicates the selected time (in hour segment) that will be played back. Go to a specific hour by clicking the mouse or dragging the pointer on the desired hour segment. Video image will be played back starting with the first image captured within the one-hour segment.

If you want to view images for a different date, select the date in the calendar by pressing the "Select Date" button.

Chapter 6. DVR Mini Player

6.1 Description

DvrPlayer is a single channel playback player for individual video file. Once DvrPlayer is installed, it works with Windows for file click, Drag & Drop to playback the video. AVI, JPEG file conversion, print is supported.



: Moves one frame each forward/backward

: Fast forward/backward playback

: Forward/backward playback

: Stop playback

: Open playback file

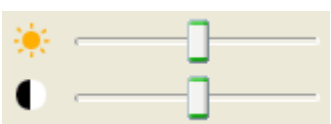
: Open AVI, JPEG conversion window

: Open printing window

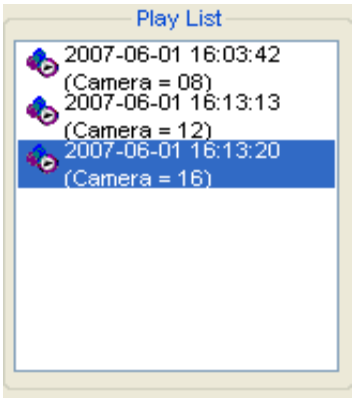
: Toggle to full screen or original screen

: Turn on or off Audio

: Hide or display video information


: Controls Brightness and Contrast of the images

: Displays video file information for playback



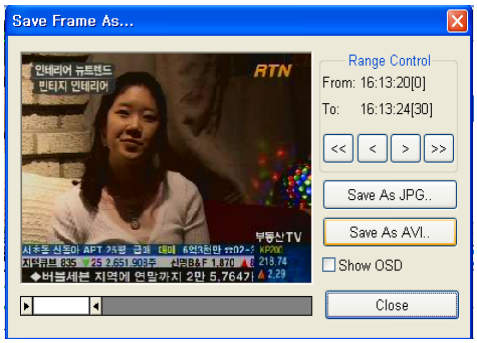
: Automatically adds list of files for playback

: Playback toolbar for a full screen display (There is automatic hiding function)

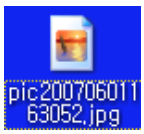
6.2 Drag & Drop

DvrPlayer software supports Drag & Drop GUI. Next we will take a look at Drag & Drop which is integrated with Lava Net.

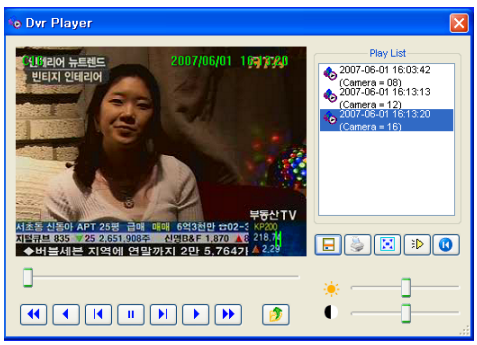
1. When you drag playback window from DvrPlayer into Save Frame, Print Frame the image can be saved as Jpeg. The desktop of Windows XP system displays the current image as dragged one and created Jpeg file name has date and time of creation.



Save As JPG

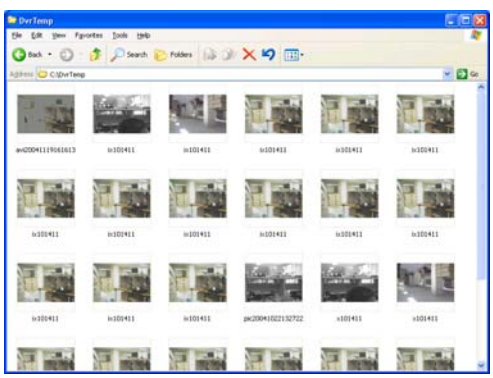


2. You can do Drag &Drop into MS Office product such as Ms Word, Excel, etc. The following image shows the image of Drag & Drop performed into MS-Word.

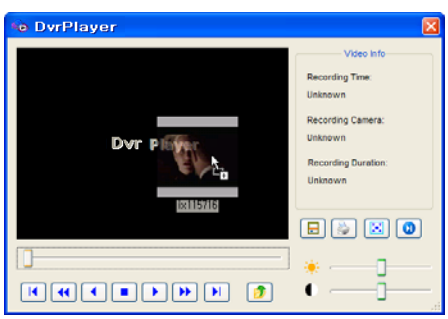


Drag & Drop

3. DvrPlayer is able to playback a single or multiple video files from Windows Explorer by Drag & Drop. Dragged file is added to Play List subsequently.

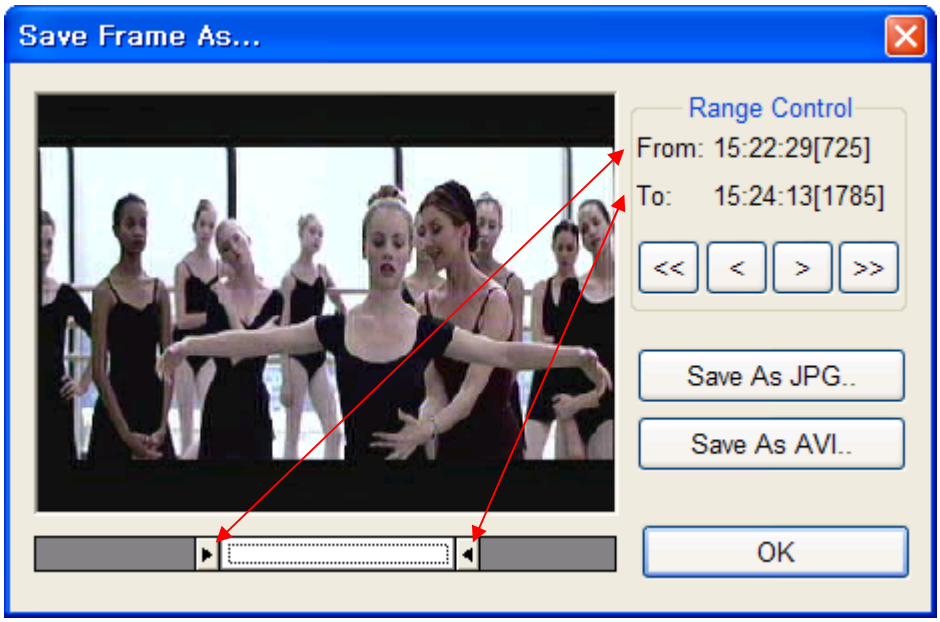


Drag & Drop



6.3 Save Frame Usage

DvrPlayer allows to convert the DVR proprietary video format into JPEG, AVI. It is also possible to change into MPEG4, DVIX using additional video codec.



From: 15:22:29[725] : Shows the first frame information. (HH:MM:SS [Frame Number])

To: 15:24:13[1785] : Shows the last frame information

: Move the first frame location of segment. The appropriate frame is displayed.

: Set the last frame location of segment. The appropriate frame is displayed.

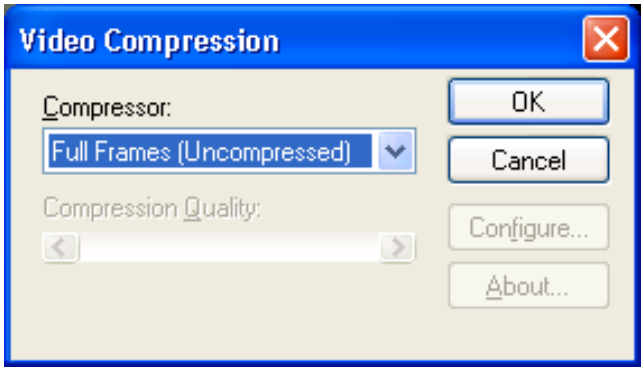
<< >> : Moves 5 frames forward/backward for the segment of first/last frame.

< > : Moves one frame forward/backward for the segment of first/last frame.

Save As JPG.. : Saving the displaying screen frame into the JPEG file.

Save As AVI.. : Save as AVI format the user selected range of video.

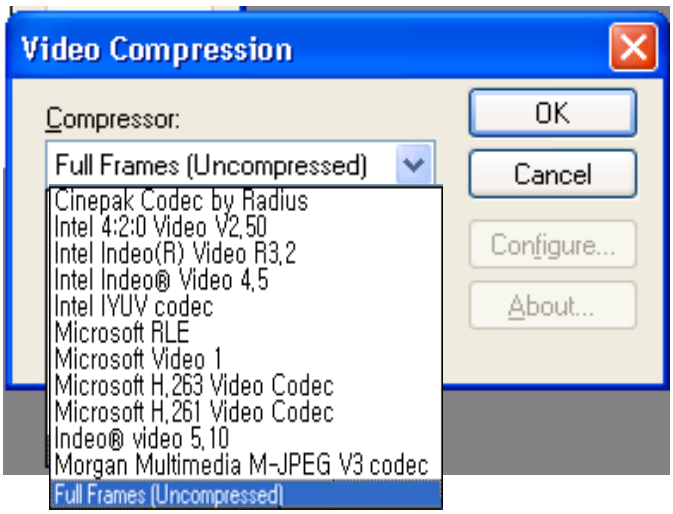
1. Saving without compression : Generally, it is suitable to save a small video clip. Large video file, for example, to save over an hour without compression the file size can exceed over 1GB. It may not be played with Windows Media Player or recognized by other types video player.



2. Using compression Codec : It is possible to save a large video file over an hour long into AVI file format. The file created using compression Codec is small. Codec format that can process 24 Bit RGB is supported. Most of the recent Codec can be used.

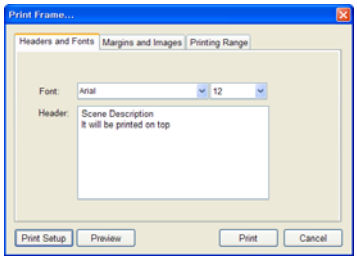
The following is the list of Codec installed in Windows. Supported Codec are as following.

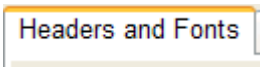
Intel Indeo, Microsoft Video 1, Xvid, DivX, 3ivx, Microsoft MPEG-4, Microsoft Windows Media Video 9, M-JPEG V3/2000 are supported.



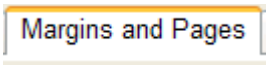
6.4 Print Frame Usage

DvrPlayer provides the convenient Printing function. The Print option has image description, print margin, page setting and printing range setting. Printer related menu, such as Print Setup, Preview, Print is provided.

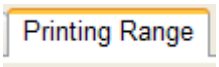




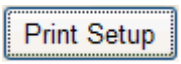
: Scene Description Page



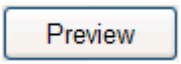
: Print Margins & Pages Setting



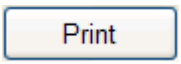
: Print Range Setting



: Print Setup Button

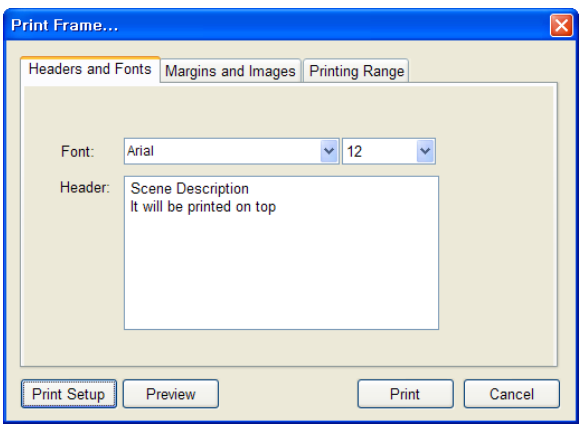


: Print Preview Button

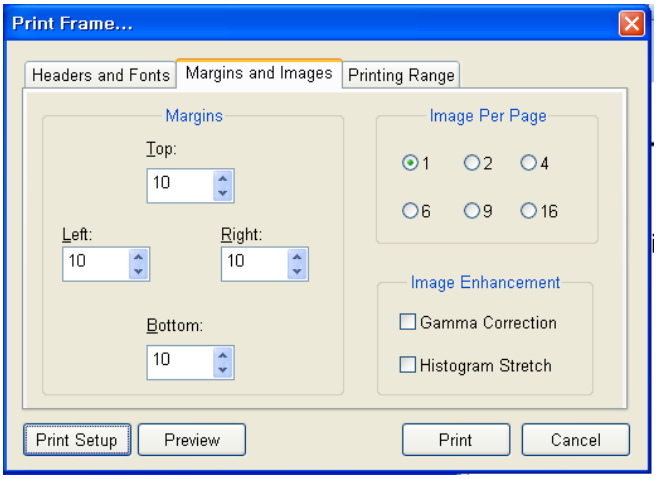


: Print Button

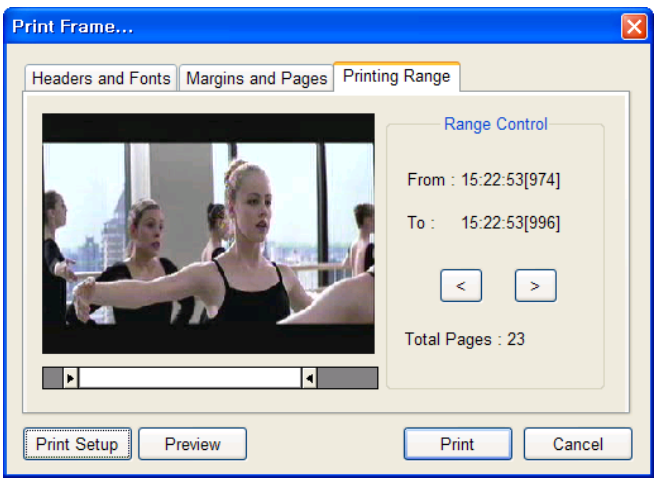
1. Scene Description Page : Enter the description of video frame to print. Additionally, set the font type and size.



2. Print Margin & Page Setting : Sets for printer margins and the number of frame to print for each page.



3. Print Area Setting : Sets the printing area of video frame. The area is given +/- 15 frame from the paused (or stopped) image frame. User can print maximum 30 pages of frame. The area setting is same as “Appendix – Save Frame Usage”



4. Preview : After you set printing range, Images per page (split mode), Printing description, Page Orientation then you print preview with Preview Button

In print preview mode, you can print directly by clicking print button on the top most toolbar

Following picture show that Print preview with A4 Landscape, 3x3 Split Mode

(※If Printer not installed correctly or wrong printer driver, print preview may not work)